

June 1986

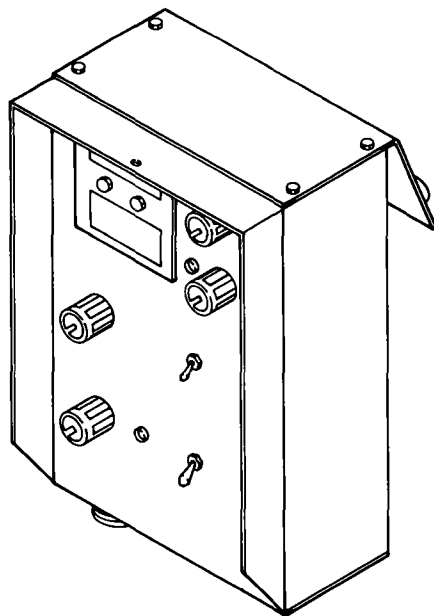
FORM: OM-533

Effective With Style No. JG-11

IMPORTANT: Read and understand the entire contents of both this manual and the power source manual used with this unit, with special emphasis on the safety material throughout both manuals, before installing, operating, or maintaining this equipment. This unit and these instructions are for use only by persons trained and experienced in the safe operation of welding equipment. Do not allow untrained persons to install, operate, or maintain this unit. Contact your distributor if you do not fully understand these instructions.

MODEL
RPC-IP

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OWNER'S MANUAL



MILLER ELECTRIC MFG. CO.

718 S. BOUNDS ST, P.O. Box 1079
APPLETON, WI 54912 USA

ADDITIONAL COPY PRICE 35 CENTS

NWSA CODE NO. 4579
PRINTED IN U.S.A.

LIMITED WARRANTY

EFFECTIVE: JANUARY 2, 1986

This warranty supersedes all previous MILLER warranties and is exclusive with no other guarantees or warranties expressed or implied.

LIMITED WARRANTY - Subject to the terms and conditions hereof, Miller Electric Mfg. Co., Appleton, Wisconsin warrants to its Distributor/Dealer that all new and unused Equipment furnished by Miller is free from defect in workmanship and material as of the time and place of delivery by Miller. No warranty is made by Miller with respect to engines, trade accessories or other items manufactured by others. Such engines, trade accessories and other items are sold subject to the warranties of their respective manufacturers, if any. All engines are warranted by their manufacturer for one year from date of original purchase, except Tecumseh and Onan engines which have a two year warranty.

Except as specified below, Miller's warranty does not apply to components having normal useful life of less than one (1) year, such as spot welder tips, relay and contactor points, MILLERMATIC parts that come in contact with the welding wire including nozzles and nozzle insulators where failure does not result from defect in workmanship or material.

Miller shall be required to honor warranty claims on warranted Equipment in the event of failure resulting from a defect within the following periods from the date of delivery of Equipment to the original user:

1. Arc welders, power sources and components 1 year
2. Original main power rectifiers 3 years
(labor - 1 year only)
3. All welding guns, feeder/guns and plasma torches . . . 90 days
4. All other Millermatic Feeders 1 year
5. Replacement or repair parts, exclusive of labor . . 60 days
6. Batteries 6 months

provided that Miller is notified in writing within thirty (30) days of the date of such failure.

As a matter of general policy only, Miller may honor claims submitted by the original user within the foregoing periods.

In the case of Miller's breach of warranty or any other duty with respect to the quality of any goods, the exclusive remedies therefore shall be, at Miller's option (1) repair or (2) replacement or, where authorized in writing by Miller in appropriate cases, (3) the reasonable cost of repair or replacement at an authorized Miller service station or (4) payment of or credit for the purchase price (less reasonable depreciation based upon actual use) upon return of the goods at Customer's risk and expense. MILLER's option of repair or replacement will be F.O.B., Factory, at Appleton, Wisconsin, or F.O.B., at a MILLER authorized service facility, therefore, no compensation for transportation costs of any kind will be allowed. Upon receipt of notice of apparent defect or failure, Miller shall instruct the claimant on the warranty claim procedures to be followed.

ANY EXPRESS WARRANTY NOT PROVIDED HEREIN AND ANY IMPLIED WARRANTY, GUARANTY OR REPRESENTATION AS TO PERFORMANCE, AND ANY REMEDY FOR BREACH OF CONTRACT WHICH, BUT FOR THIS PROVISION, MIGHT ARISE BY IMPLICATION, OPERATION OF LAW, CUSTOM OF TRADE OR COURSE OF DEALING, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR OF FITNESS FOR PARTICULAR PURPOSE, WITH RESPECT TO ANY AND ALL EQUIPMENT FURNISHED BY MILLER IS EXCLUDED AND DISCLAIMED BY MILLER.

EXCEPT AS EXPRESSLY PROVIDED BY MILLER IN WRITING, MILLER PRODUCTS ARE INTENDED FOR ULTIMATE PURCHASE BY COMMERCIAL/INDUSTRIAL USERS AND FOR OPERATION BY PERSONS TRAINED AND EXPERIENCED IN THE USE AND MAINTENANCE OF WELDING EQUIPMENT AND NOT FOR CONSUMERS OR CONSUMER USE. MILLER'S WARRANTIES DO NOT EXTEND TO, AND NO RESELLER IS AUTHORIZED TO EXTEND MILLER'S WARRANTIES TO, ANY CONSUMER.

ERRATA SHEET

After this manual was printed, refinements in equipment design occurred. This sheet lists exceptions to data appearing later in this manual.

AMENDMENT TO SECTION 2 – INSTALLATION

Add Section 2-3. 650/1000 Ampere Model Selector Switch



WARNING: ELECTRIC SHOCK can kill.

- Do not touch live electrical parts.
- Shut down welding power source and disconnect the Remote Pendant Control before changing position of dip switches.

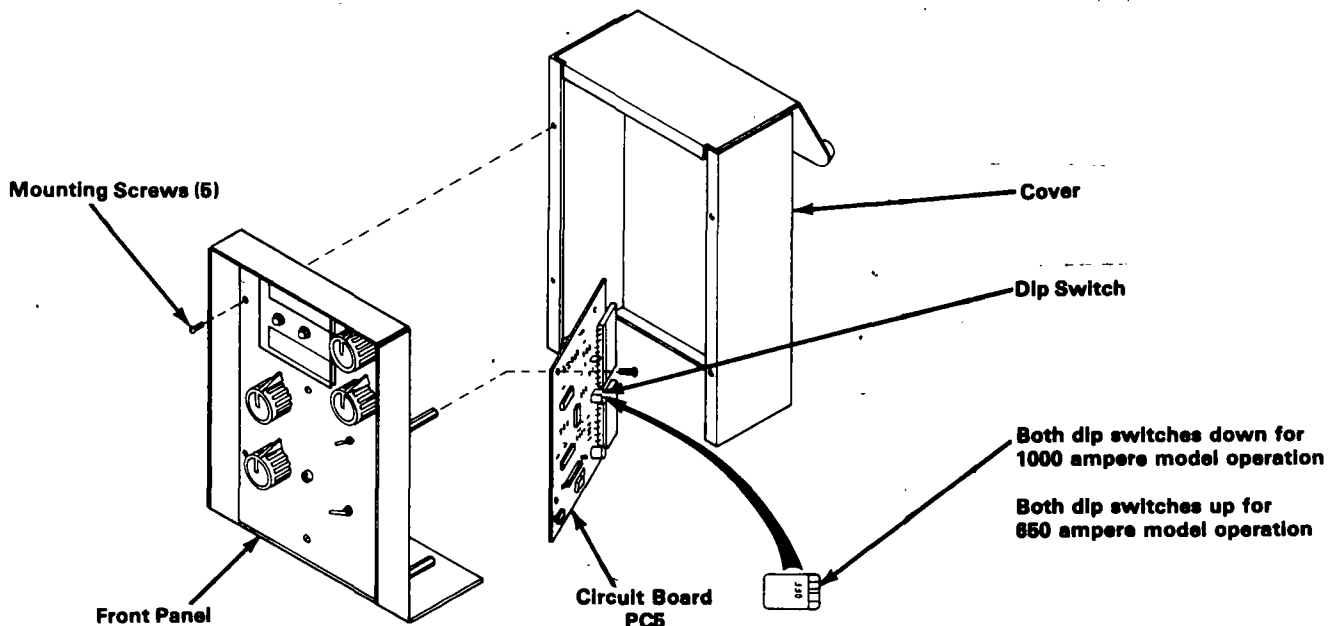
ELECTROSTATIC DISCHARGE (ESD) can damage circuit board components.

- Put on properly grounded wrist strap **BEFORE** handling circuit boards.
- Transport all static-sensitive components in proper static-shielding carriers or packages.
- Perform work only at a static-safe work area.

This Remote Pendant Control is designed to be used with either a 650 or 1000 ampere Intellipulse welding power source. A dip switch is located on circuit board PC5 to set up the Remote Pendant Control for operation with 650 or 1000 ampere models. The unit is shipped from the factory set up for operation with the 650 ampere models. Proceed as follows to set up the Remote Pendant Control for operation with 1000 ampere models:

1. Remove cover.
2. Place both dip switches in the down position for operation with 1000 ampere models. Place both dip switches in up position for operation with 650 ampere models (see Figure 2-2 on this Errata Sheet).
3. Reinstall cover.

Add Figure 2-2. Dip Switch Positions And Locations



B-113 509

Figure 2-2. Dip Switch Positions And Locations

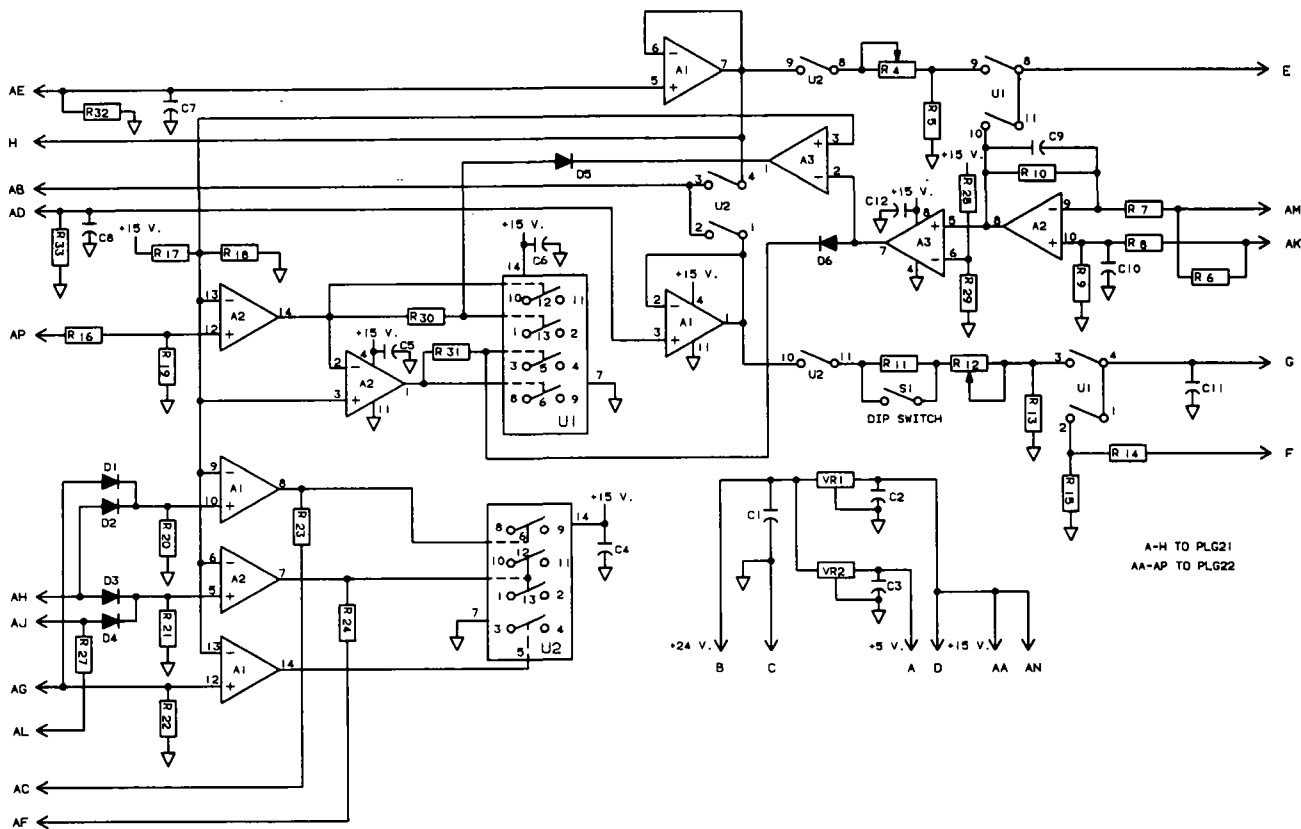
Amend Figure 5-1. Circuit Diagram For Pendant Control



The diagram shows a multi-stage electronic circuit. It includes several operational amplifiers (A1, A2, A3) configured in various modes, including comparators and buffers. A central logic block U1 (likely a 74181 ALU) is connected to multiple inputs and outputs. The circuit is powered by +15V, +24V, and -5V supplies. It features a DIP switch (S1) and several relays (U1, U2). The output lines are labeled A through H, AA through AP, and E through F. A legend indicates that A-H are connected to PLG21 and AA-AP to PLG22.

Circuit Diagram No. B-107 994-A

Figure 5-2. Circuit Diagram For Circuit Board PC5 Effective Through Serial No: JJ487350



Circuit Diagram No. B-124 223

Figure 5-2A. Circuit Diagram For Circuit Board PC5 Effective With Serial No. JJ487350

Add Figure 5-3. Wiring Diagram For Pendant Control (See Page 4 on this Supplement)

AMENDMENT TO PARTS LIST

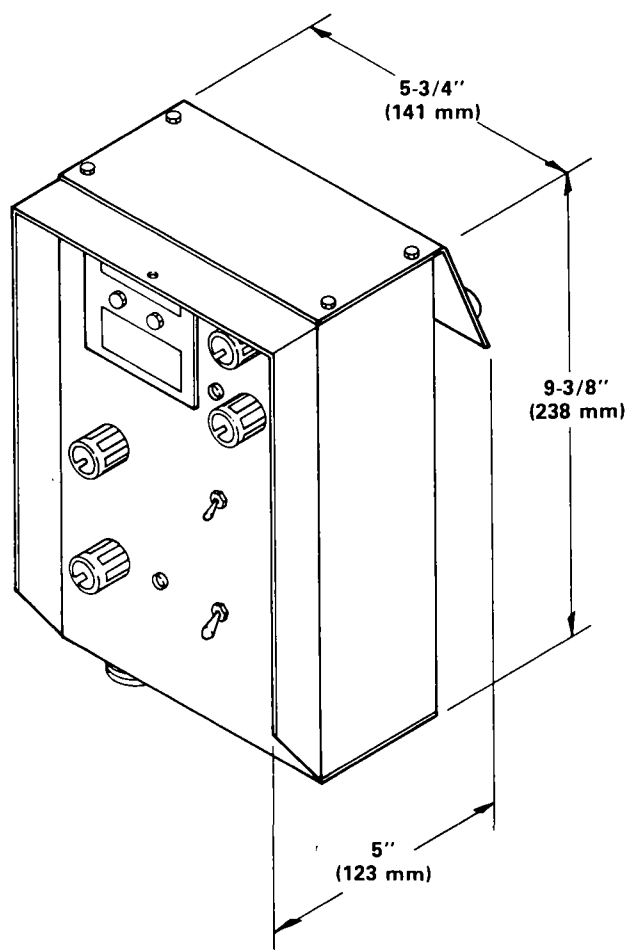
Amend the Parts List as follows:

**	Dia. Mkgs.	Part No.	Replaced With	Description	Quantity
1-10	S6	108 944	108 945	SWITCH, rotary	1
2-		108 198	124 002	CIRCUIT CARD, pendant (Eff w/JJ487350)	1
2-	R13,28	108 051	095 828	RESISTOR, metal film 0.25 watt 26.7K ohm (Eff w/JJ487350)	1
	R32,33		052 145	RESISTOR, carbon film 0.25 watt 170K ohm	2

BE SURE TO PROVIDE MODEL AND SERIAL NUMBER WHEN ORDERING REPLACEMENT PARTS.



Wiring Diagram No. C-122 538-A



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Figure 1 - 1. Dimensions

1 - 1. GENERAL INFORMATION AND SAFETY

A. General

Information presented in this manual and on various labels, tags, and plates on the unit pertains to equipment design, installation, operation, maintenance, and troubleshooting which should be read, understood, and followed for the safe and effective use of this equipment.

B. Safety

The installation, operation, maintenance, and troubleshooting of arc welding equipment requires practices and procedures which ensure personal safety and the safety of others. Therefore, this equipment is to be installed, operated, and maintained only by qualified persons in accordance with this manual and all applicable codes such as, but not limited to, those listed at the end of Section 1 - Safety Rules For Operation Of Arc Welding Power Source in the welding power source Owner's Manual.

Safety instructions specifically pertaining to this unit appear throughout this manual highlighted by the signal words **WARNING** and **CAUTION** which identify different levels of hazard.

WARNING statements include installation, operation, and maintenance procedures or practices which if not carefully followed could result in serious personal injury or loss of life.

CAUTION statements include installation, operation, and maintenance procedures or practices which if not carefully followed could result in minor personal injury or damage to this equipment.

A third signal word, **IMPORTANT**, highlights instructions which need special emphasis to obtain the most efficient operation of this equipment.

1 - 2. RECEIVING-HANDLING - Prior to installing this equipment, clean all packing material from around the unit and carefully inspect for any damage that may have occurred during shipment. Any claims for loss or damage that may have occurred in transit must be filed **by the purchaser with the carrier**. A copy of the bill of lading will be furnished by the manufacturer on request if occasion to file claim arises.

When requesting information concerning this equipment, it is essential that Model Description and Style Number of the equipment be supplied.

1 - 3. DESCRIPTION - This unit is a Remote Pendant Control for the Intellipulse welding power source. When properly connected to the welding power source this unit provides arc control, contactor control, voltage/ampereage control, CV/CC selection, and pulse frequency selection.

SECTION 2 - INSTALLATION

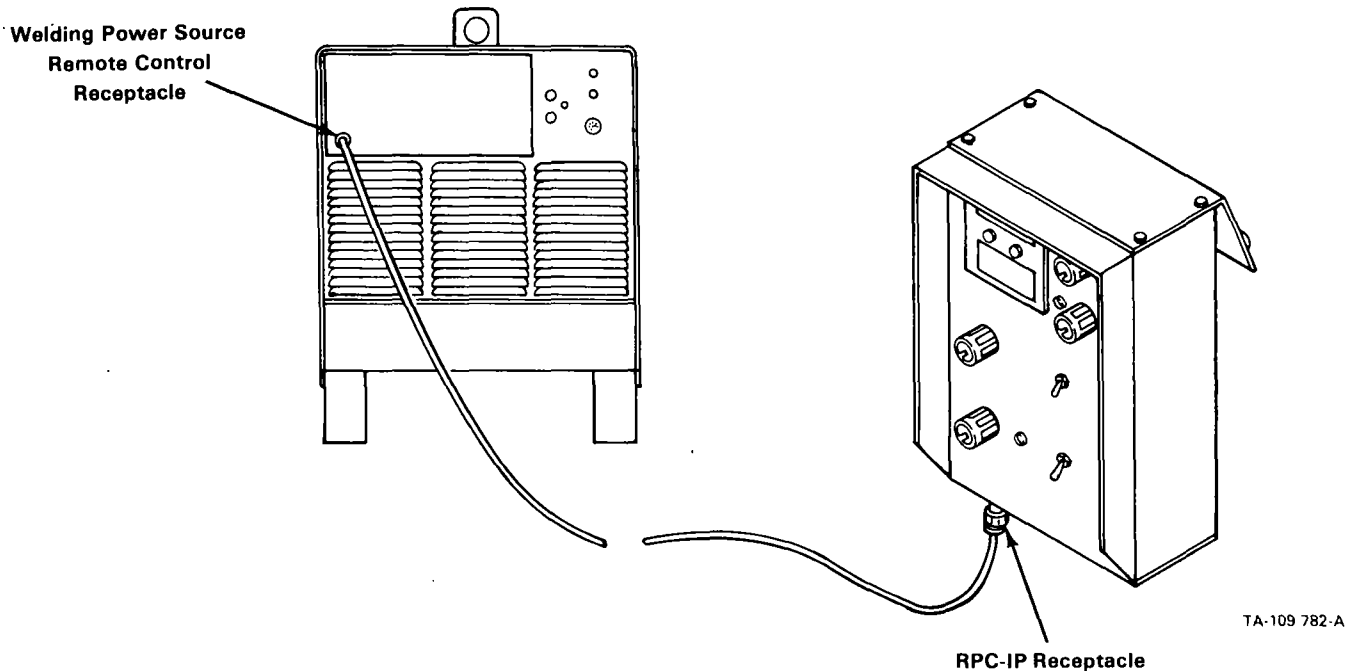


Figure 2 - 1. Power Source/Remote Control Connections

WARNING: ELECTRIC SHOCK can kill.

- Do not touch live electrical parts.
- Shut down welding power source and be sure it cannot be accidentally energized before making remote Pendant Control connections.
- Place CONTACTOR switch in OFF position.

2 - 1. WELDING POWER SOURCE REMOTE CONTROL RECEPTACLE CONNECTIONS (Figure 2-1)

A 17-socket Amphenol receptacle on the welding power source front panel (see OM-286) provides a con-

nection point for the Remote Pendant Control. Insert 17-pin Amphenol plug from the interconnecting cable fully into the receptacle and rotate collar clockwise.

2 - 2. RPC-IP RECEPTACLE CONNECTIONS (Figure 2-1)

A 17-pin Amphenol receptacle on the remote control provides a connection point for the interconnecting cable from the welding power source. Insert the 17-socket plug from the interconnecting cable fully into the receptacle and rotate collar clockwise.

SECTION 3 - OPERATOR CONTROLS

3 - 1. MODE SELECTOR SWITCH (Figure 3-1)

The Mode Selector switch allows selection of CC (constant current), CV (constant voltage), or pulsed output from the welding power source.

The CC position provides a constant current output specifically designed for Shielded Metal Arc (SMAW) and Gas Tungsten Arc (GTAW) Welding processes. The CC position is also normally used for Air Carbon Arc Cutting (AAC) and gouging processes.

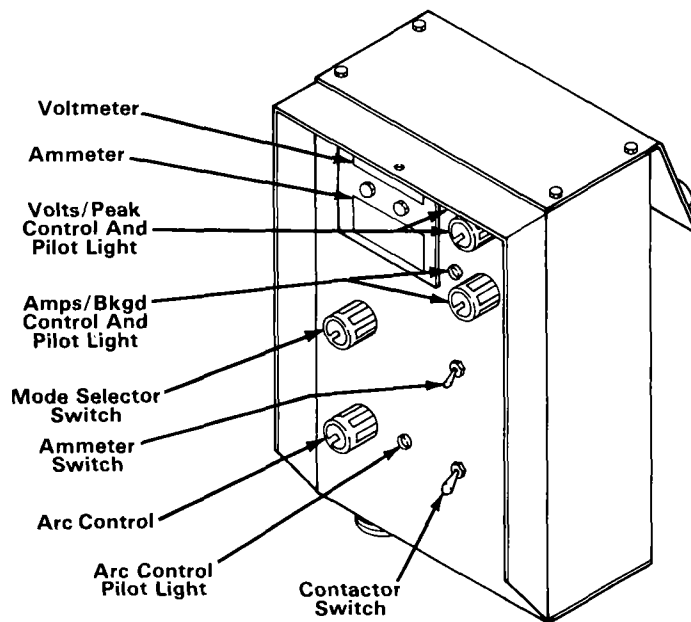
The CV position provides a constant voltage output designed for wire feeding applications such as Gas Metal Arc (GMAW), Flux Cored Arc (FCAW), or Submerged Arc (SAW) Welding.

When pulsed output is desired for Gas Metal Arc Welding-Pulsed Arc (GMAW-P), place switch at the desired number of pulses per second: 60, 90, 120 or 180.

3 - 2. ARC CONTROL AND PILOT LIGHT (Figure 3-1)

IMPORTANT: The ARC CONTROL potentiometer and pilot light are disabled in the CV (Constant Voltage) and pulsed modes.

The ARC CONTROL potentiometer provides variable selection of short-circuit current to suit individual welding conditions. Rotating this control clockwise causes the current to increase as the short-circuit condi-



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Figure 3 - 1. Front Panel View

tion is approached. When this control is set at some value above 0, the current begins to increase when arc voltage drops below 20 volts.

When the control is set at 10 (MAX.), the short-circuit current is considerably higher than normal welding current (see welding power source volt-ampere curve for CC mode). This provides extra current for arc starting in out-of-position welds as well as for certain types of electrodes.

When the control is set at 0 (SOFT), short-circuit current is the same as normal welding current. The 0 position provides current characteristics associated with the Gas Tungsten Arc Welding (GTAW) process.

When the control is set at 5, short-circuit current is approximately half that of the 10 (MAX.) position but still higher than normal welding current. The 5 position provides a moderate current increase for arc starting necessary for certain types of electrodes and applications.

Select a setting best suited for the application.

The Arc Control pilot light turns on when the Mode Selector switch is in the CC position indicating that the ARC CONTROL is active.

IMPORTANT: *The ARC CONTROL can be adjusted while welding.*

3 - 3. CONTACTOR SWITCH (Figure 3-1)

WARNING: **ELECTRIC SHOCK can kill.**

- Do not touch live electrical parts.
- Do not touch the weld output terminals when the contactor is energized.
- Do not touch electrode holder (or gun wire) and work clamp at the same time.

If the Remote Control CONTACTOR switch is in the ON position, open-circuit voltage will be present at the output terminals whenever the welding power source POWER switch ON button is depressed.

IMPORTANT: *Although the term CONTACTOR is used on the nameplate and throughout this manual, the weld output is not switched on or off by a physical secondary contactor; rather, the weld output is controlled by solid-state circuitry in the welding power source.*

If contactor control by means of a wire feeder is desired, place the Remote Control CONTACTOR switch in the OFF position. Open-circuit voltage will be present at the weld output terminals whenever the gun switch is closed.

The OFF position is normally used with all wire feeding processes (GMAW, GMAW-P, FCAW, SAW) and the Gas Tungsten Arc Welding (GTAW) process. The ON position is normally used with the Shielded Metal Arc Welding (SMAW) and the Air Carbon Arc (AAC) Cutting and gouging processes.

Lift end of toggle switch to change switch positions.

3 - 4. AMMETER SWITCH (Figure 3-1)

The AMMETER switch provides selection of reading PEAK weld amperage or Average (AVG) weld amperage on the Remote Control digital ammeter.

Normally the AVG switch position is used for reading weld amperage during Gas Metal Arc (GMAW), Flux Cored Arc (FCAW), Submerged Arc (SAW), Shielded Metal Arc (SMAW), Gas Tungsten Arc (GTAW) Welding and Air Carbon Arc (AAC) Cutting and gouging processes.

While welding using the Gas Metal Arc Welding-Pulsed Arc (GMAW-P) process, the AVG switch position is used when display of the average (background and peak) weld amperage is desired. The AMMETER switch can be placed in the PEAK position when display of peak weld amperage is desired.

3 - 5. AMPS/BKGD CONTROL AND PILOT LIGHT (Figure 3-1)

This control presets weld amperage for constant current applications and background amperage for GMAW-P applications.

When the Mode Selector switch is in the CC position or one of the pulses per second positions, the AMPS/BKGD pilot light turns on.

This control is disabled when the Mode Selector switch is in the CV position.

Rotating the control clockwise increases amperage.

IMPORTANT: *The AMPS/BKGD control can be adjusted while welding.*

3 - 6. VOLTS/PEAK CONTROL AND PILOT LIGHT (Figure 3-1)

This control presets weld voltage for constant voltage applications and peak voltage for GMAW-P applications.

When the Mode Selector switch is in the CV position or one of the pulses per second positions, the VOLTS/PEAK pilot light turns on.

This control is disabled when the Mode Selector switch is in the CC position.

Rotating the control clockwise increases voltage.

IMPORTANT: *The VOLTS/PEAK control can be adjusted while welding.*

3 - 7. METERS (Figure 3-1)

The voltmeter displays weld voltage to the nearest tenth of a volt while welding and preset voltage when unit is idling. When welding using the pulsed GMAW process, the meter displays peak voltage.

The ammeter displays weld amperage to the nearest ampere while welding and preset amperage when unit is idling. When welding using the pulsed GMAW process, the meter displays background amperage.

SECTION 4 - SEQUENCE OF OPERATION

WARNING: ELECTRIC SHOCK can kill; MOVING PARTS can cause serious injury; IMPROPER AIR FLOW AND EXPOSURE TO ENVIRONMENT can damage internal parts.

- Keep all covers and panels in place while operating.

Warranty is void if the welding power source is operated with any portion of the outer enclosure removed.

ARC RAYS, SPARKS, AND HOT SURFACES can burn eyes and skin; **NOISE** can damage hearing.

- Wear correct eye, ear, and body protection.

FUMES AND GASES can seriously harm your health.

- Use enough ventilation to keep fumes and gases from the breathing zone.

WELDING WIRE can cause puncture wounds.

- Do not point gun toward any part of the body or other personnel.

HOT METAL, SPATTER, AND SLAG can cause fire and burns.

- Watch for fire.
- Have a fire extinguisher nearby and know how to use it.

MAGNETIC FIELDS FROM HIGH CURRENTS can affect pacemaker operation.

- Wearers should consult with their doctor before going near arc welding, gouging, or spot welding operations.

See Section 1 - Safety Rules For Operation Of Arc Welding Power Source in the welding power source Owner's Manual.

4 - 1. GAS METAL ARC WELDING-PULSED ARC (GMAW-P)

WARNING: Read and follow safety information at beginning of entire Section 4 before proceeding.

1. Install and prepare welding power source according to its Owner's Manual.
2. Install Remote Control as instructed in Section 2.
3. Install and prepare wire feeder according to its Owner's Manual.
4. Depress welding power source POWER switch ON button.
5. Place Mode Selector switch to desired pulses per second (60, 90, 120, or 180) position (see Section 3-1).
6. Place CONTACTOR switch in OFF position (see Section 3-3).
7. Place AMMETER switch in the desired position (see Section 3-4).
8. Preset AMPS/BKGD control to desired background amperage setting (see Section 3-5). Pilot light should be on.

9. Preset VOLTS/PEAK control to desired peak voltage setting (see Section 3-6). Pilot light should be on.
10. Make adjustments to wire feeder.
11. Turn on shielding gas supply.
12. Begin welding.

4 - 2. GAS METAL ARC AND FLUX CORED ARC WELDING (GMAW & FCAW)

WARNING: Read and follow safety information at beginning of entire Section 4 before proceeding.

1. Install and prepare welding power source according to its Owner's Manual.
2. Install Remote Control as instructed in Section 2.
3. Install and prepare wire feeder according to its Owner's Manual.
4. Depress welding power source POWER switch ON button.
5. Place Mode Selector switch in CV position (see Section 3-1).
6. Place CONTACTOR switch in OFF position (see Section 3-3).
7. Place AMMETER switch in AVG (average) position (see Section 3-4).
8. Preset VOLTS/PEAK control to desired weld voltage setting (see Section 3-6). Pilot light should be on.
9. Make adjustments to wire feeder.
10. Turn on shielding gas supply if applicable.
11. Begin welding.

4 - 3. SHIELDED METAL ARC WELDING (SMAW)

WARNING: Read and follow safety information at beginning of entire Section 4 before proceeding.

1. Install and prepare welding power source according to its Owner's Manual.
2. Install Remote Control as instructed in Section 2.
3. Depress the welding power source POWER switch ON button.
4. Place Mode Selector switch in CC position (see Section 3-1).
5. Rotate ARC CONTROL to desired position (see Section 3-2). Pilot light should be on.

6. Place CONTACTOR switch in ON position (see Section 3-3).
7. Place the AMMETER switch in the AVG (average) position (see Section 3-4).
8. Preset AMPS/BKGD control to desired weld amperage setting (see Section 3-5). Pilot light should be on.
9. Begin welding.

4 - 4. SUBMERGED ARC WELDING (SAW)

WARNING: Read and follow safety information at beginning of entire Section 4 before proceeding.

1. Install and prepare welding power source according to its Owner's Manual.
2. Install Remote Control as instructed in Section 2.
3. Install flux system according to its Owner's Manual.
4. Install and prepare wire feeder according to its Owner's Manual.
5. Depress welding power source POWER switch ON button.
6. Place Mode Selector switch in CV position (see Section 3-1).
7. Place Contactor switch in the OFF position (see Section 3-3).
8. Place AMMETER switch in AVG (average) position (see Section 3-4).
9. Preset VOLTS/PEAK control to desired weld voltage setting (see Section 3-6). Pilot light should be on.
10. Make adjustments to wire feeder.
11. Turn on flux supply system.
12. Begin welding.

4 - 5. GAS TUNGSTEN ARC WELDING (GTAW)

WARNING: Read and follow safety information at the beginning of entire Section 4 before proceeding.

1. Install and prepare welding power source according to its Owner's Manual.
2. Install Remote Control as instructed in Section 2.
3. Install and prepare High-Frequency unit according to its Owner's Manual if applicable. Scratch start GTAW does not require the use of external high frequency.

4. Depress welding power source POWER switch ON button.
5. Place Mode Selector switch in CC position (see Section 3-1).
6. Set ARC CONTROL to MIN. (see Section 3-2). Pilot light should be on.
7. Place CONTACTOR switch in the ON position (see Section 3-3).
8. Place AMMETER switch in the AVG. (average) position (see Section 3-4).
9. Preset AMPS/BKGD control to desired weld amperage setting (see Section 3-5). Pilot light should be on.
10. Turn on shielding gas and water supplies as applicable.
11. Turn on and adjust High-Frequency unit if applicable.
12. Begin welding.

4 - 6. AIR CARBON ARC CUTTING AND GOUGING (AAC)

WARNING: *Read and follow safety information at the beginning of entire Section 4 before proceeding.*

1. Install and prepare welding power source according to its Owner's Manual.
2. Install Remote Control as instructed in Section 2.
3. Connect compressed air supply.

4. Depress welding power source POWER switch ON button.
5. Place Mode Selector switch in the CC position (see Section 3-1).
6. Set ARC CONTROL to desired position (see Section 3-2). Pilot light should be on.
7. Place CONTACTOR switch in ON position (see Section 3-3).
8. Place AMMETER switch in AVG (average) position (see Section 3-4).
9. Preset AMPS/BKGD control to desired amperage setting (see Section 3-5). Pilot light should be on.
10. Turn on air supply.
11. Begin cutting/gouging process.

4 - 7. SHUTTING DOWN

1. Stop welding.
2. Depress the welding power source POWER switch OFF button.
3. Turn off the shielding gas and water supplies if applicable.

WARNING: **HIGH CONCENTRATION OF SHIELDING GASES** can harm health or kill.

- *Shut off gas supply when not in use.*
- 4. Turn off flux supply and compressed air supply if applicable.

SECTION 5 - MAINTENANCE & TROUBLESHOOTING

5 - 1. MAINTENANCE - Usage and shop conditions will determine the frequency and type of maintenance. Inspect equipment as follows:

WARNING: **ELECTRIC SHOCK** can kill.

- *Do not touch live electrical parts.*
 - *Shut down welding power source and disconnect remote control before inspecting, maintaining, or servicing unit. Power to the remote control should be disconnected before attempting repair or replacement of internal components.*
1. Inspect interconnecting cord for damage to or breaks in the insulation jacket, particularly at the plugs. Repair or replace cord as necessary.
 2. Remove grease and grime from components; moisture from electrical parts and cable.

5 - 2. TROUBLESHOOTING

WARNING: **ELECTRIC SHOCK** can kill.

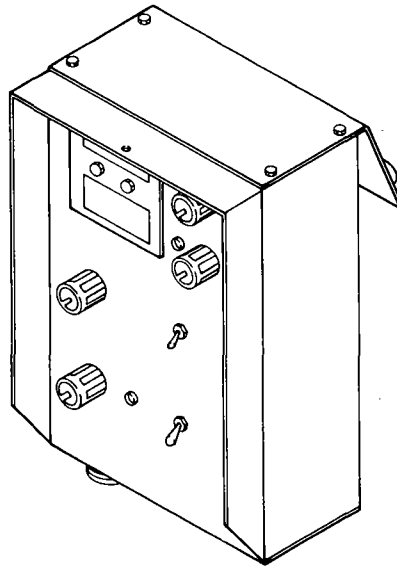
- *Do not touch live electrical parts.*
- *Shut down welding power source and disconnect remote control before inspecting, maintaining, or servicing unit. Power to the remote control should be disconnected before attempting repair or replacement of internal components.*

A. General

It is assumed that proper installation has been made, according to Section 2 of this manual, and that the unit has been functioning properly until trouble developed.

B. Troubleshooting

Troubleshooting to be performed only by qualified persons.



PARTS LIST

Item No.	Dia. Mkgs.	Part No.	Description	Quantity
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Figure A Main Assembly

1		108 056	CASE SECTION, front end	1
2		109 779	CASE	1
3	R6,7	603 856	POTENTIOMETER, WW 10 turn 2 watt 10K ohm	2
4	S7	011 770	SWITCH, toggle SPDT 5 amp 125 volts	1
5	S8	079 722	SWITCH, toggle SPDT 0.4 amp 2-4 volts dc	1
6	LED1-3	083 850	LIGHT, indicator-red lens 2 volts	3
7	RC3	097 867	RECEPTACLE, 17 pin MS-3102A-20-29P	1
8			NAMEPLATE (order by model & style number)	1
9	R8	009 156	POTENTIOMETER, carbon 1 turn 2 watt 2.5K ohm	1
10	S6	108 944	SWITCH, rotary-0.5 amp 115 volts ac	1
11		108 903	SHIELD, meter	1
12	A & V	108 453	METER, DC 0-200 MV	2
		108 904	ANCHOR, meter	1
	PC5	108 198	CIRCUIT CARD, pendant (Fig B Pg 2)	1
		038 785	STRIP, terminal 3 pole	1
		072 566	HOUSING, terminal header 8 pin	1
		081 380	HOUSING, terminal header 14 pin	1
		108 907	HOUSING, receptacle 13 socket	2
		097 922	KNOB, pointer	4
		019 663	MOUNT, 15/16 OD x 3/8	2
		097 132	STAND-OFF, No. 6-32 x 3/8 inches	4
		094 484	STAND-OFF, No. 6-32 x 1 inch	4

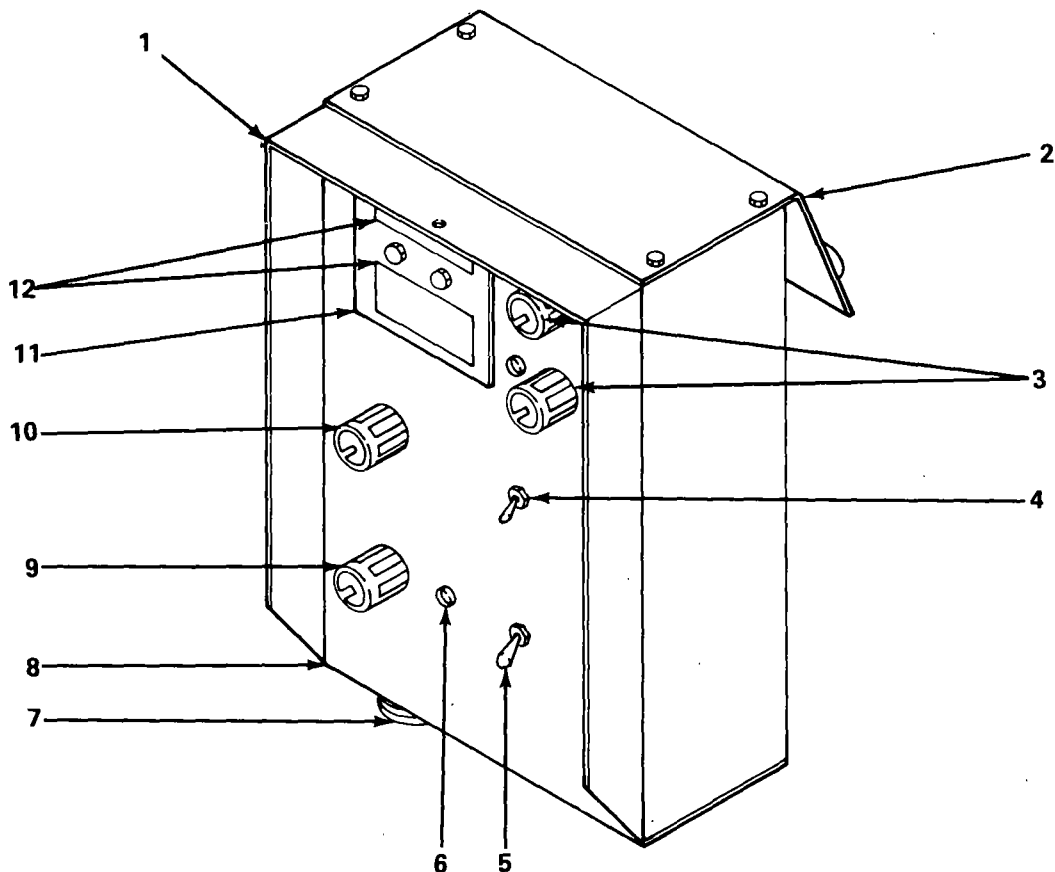


Figure A - Main Assembly

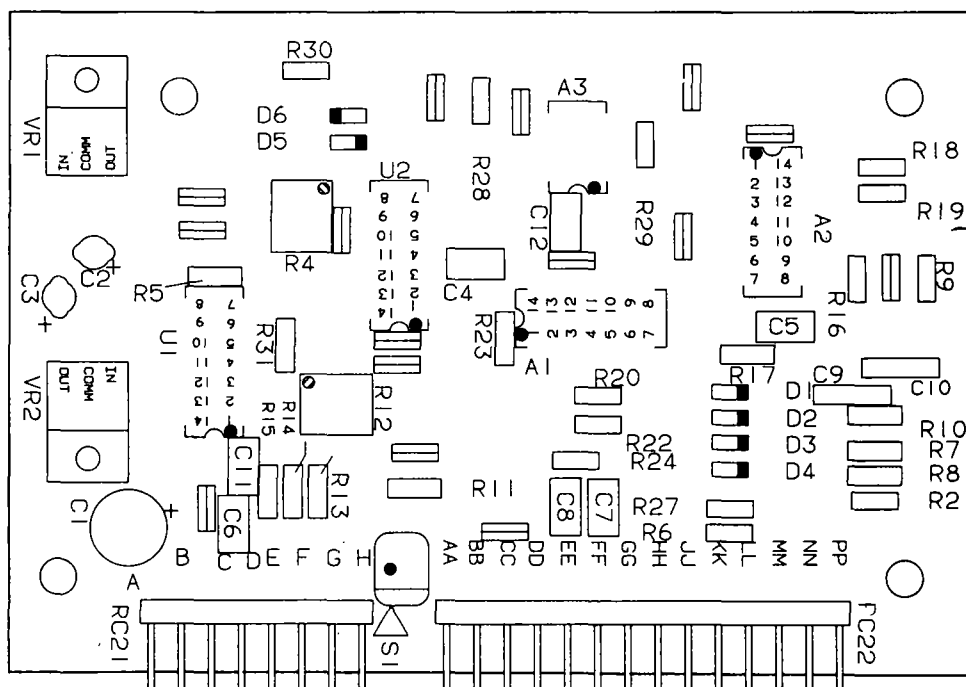
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BE SURE TO PROVIDE MODEL AND STYLE NUMBER WHEN ORDERING REPLACEMENT PARTS.

Dia. Mkgs.	Part No.	Description	Quantity
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Figure B 108 198 Circuit Card, Pendant

A1,2	096 275	IC, linear 324	2
A3	009 159	IC, linear 358	1
C1	039 482	CAPACITOR, electrolyte 100 uf 35 volts dc	1
C2,3	000 348	CAPACITOR, tantalum 0.47 uf 35 volts	2
C4-8,11,12	073 739	CAPACITOR, ceramic 0.1 uf 50 volts dc	7
C9,10	003 530	CAPACITOR, ceramic 1 uf 50 volts	2
D1-6	028 351	DIODE, signal 0.020 amp 75 volts SP	6
R4	009 172	POTENTIOMETER, cermet 25 turn 0.5 watt 50K ohm	1
R5	108 054	RESISTOR, metal film 0.25 watt 1.74K ohm	1
R6	072 677	RESISTOR, carbon film 0.25 watt 33K ohm	1
R7,8	089 174	RESISTOR, metal film 0.25 watt 100K ohm	2
R9,10,29	097 110	RESISTOR, metal film 0.25 watt 1K ohm	3
R11	052 142	RESISTOR, carbon film 0.25 watt 120K ohm	1
R12	095 246	POTENTIOMETER, cermet 20 turn 0.5 watt 500K ohm	1
R13,28	108 051	RESISTOR, metal film 0.25 watt 26.7K ohm	2
R14	095 823	RESISTOR, metal film 0.25 watt 44.8K ohm	1
R15	089 173	RESISTOR, metal film 0.25 watt 4.99K ohm	1
R16	108 053	RESISTOR, metal film 0.25 watt 21K ohm	1
R17	052 138	RESISTOR, carbon film 0.25 watt 20K ohm	1
R18,20-22,30,31	035 827	RESISTOR, carbon film 0.25 watt 10K ohm	6
R19	039 332	RESISTOR, carbon film 0.25 watt 15K ohm	1
R23,24,27	044 633	RESISTOR, carbon film 0.25 watt 1.2K ohm	3
	092 648	RESISTOR, carbon film 0.25 watt zero ohm	15
RC21	072 564	TERMINAL, header 8 pin	1
RC22	081 382	TERMINAL, header 14 pin	1
S1	092 367	SWITCH, DIP SPST	1
U1,2	052 149	IC, interface 4066	2
VR1	083 772	IC, linear 7815	1
VR2	071 248	IC, linear 78M05	1



**COMPONENTS TO BE REPLACED BY
QUALIFIED PERSONNEL ONLY**

Figure B - Circuit Card, Pendant

Ref. C-108 199

BE SURE TO PROVIDE MODEL AND STYLE NUMBER WHEN ORDERING REPLACEMENT PARTS.

The following information is supplied to diagnose and provide remedies for some of the troubles that may develop in this unit. Check welding power source Owner's Manual for possible problems caused by welding power source malfunctions.

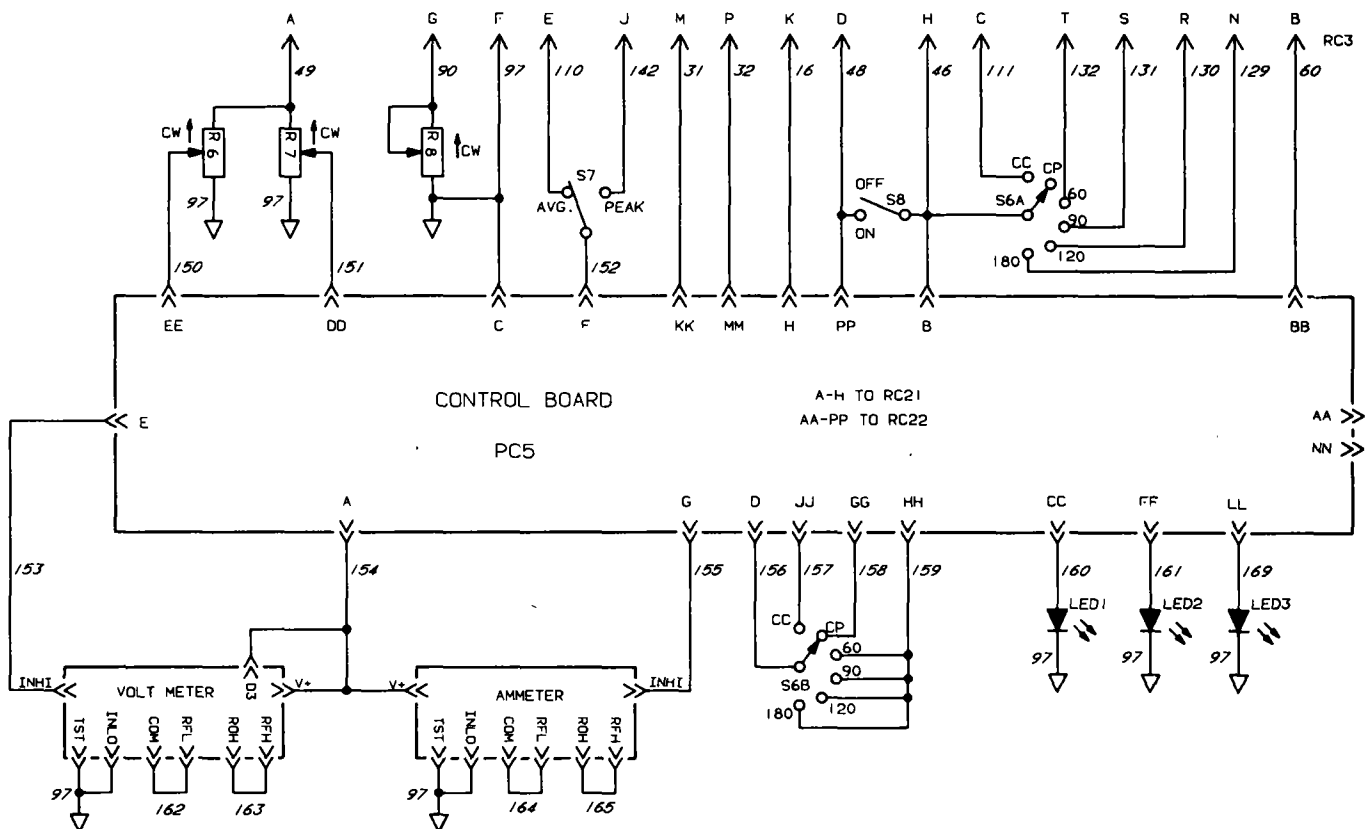
Use this information in conjunction with the circuit diagram while performing troubleshooting procedures. If the trouble is not remedied after performing these procedures, the nearest Factory Authorized Service Station should be contacted. In all cases of equipment malfunction, the manufacturer's recommendations should be strictly followed.

Problems with this unit fall into three categories: 1.) front panel components, 2.) circuit board PC5, or 3.) the welding power source or interconnecting cable.

If everything on the remote control functions except a particular switch, meter, or control, the problem can be attributed to a broken component. Replace the broken component.

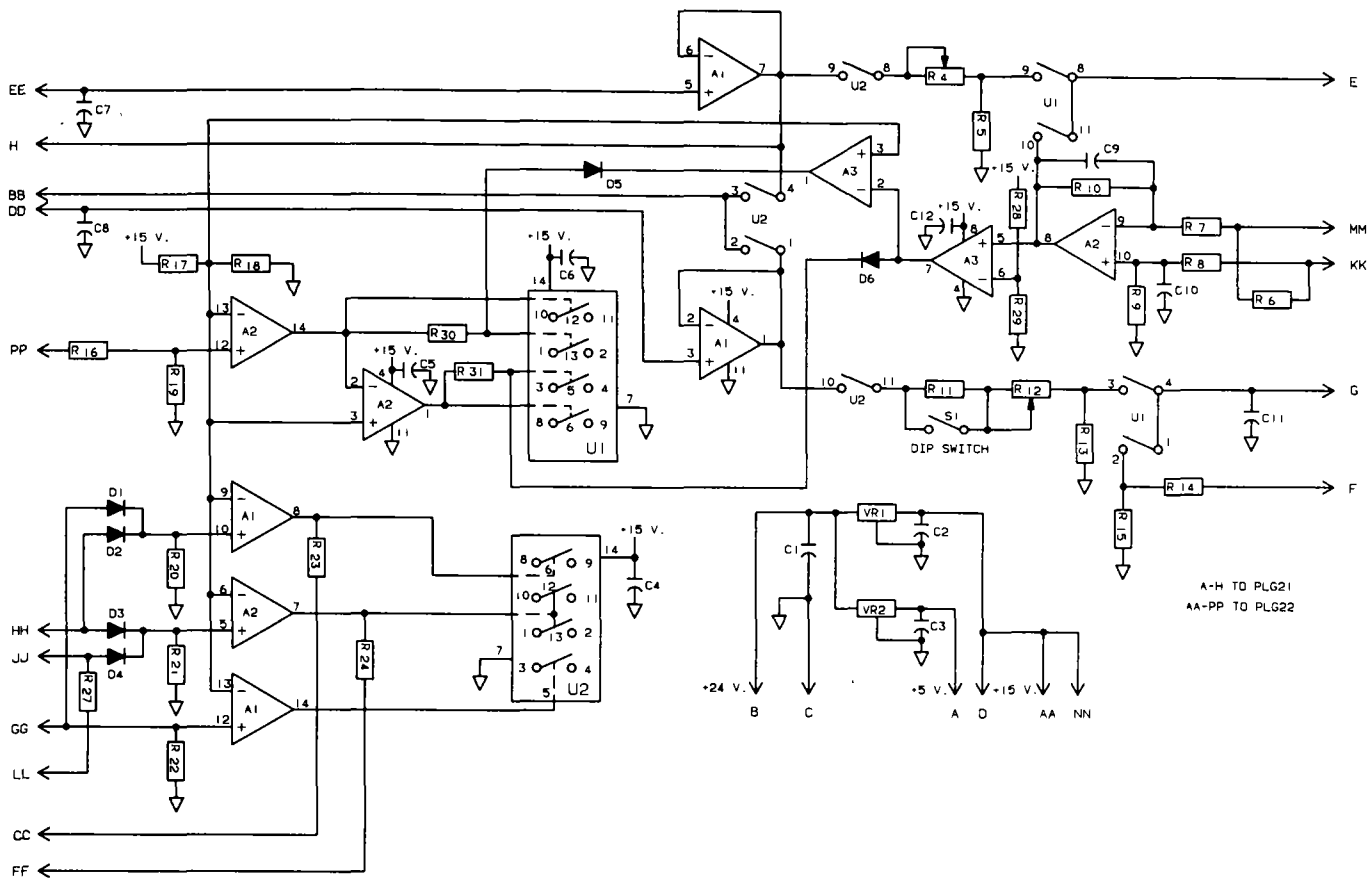
If the problem is still present, replace PC5. If the remote control is entirely non-functional, replace PC5. If erratic conditions occur and the welding power source was working properly, replace PC5.

A break in the interconnecting cable can interrupt power or command signals between welding power source and remote control. Replace interconnecting cable if lack of continuity is suspected. Printed circuit board PC1 in the welding power source sends and receives signals from the remote control. If all other components of the system are functioning, replace welding power source PC1 according to instructions in welding power source Owner's Manual.



Circuit Diagram No. B-107 993

Figure 5 - 1. Circuit Diagram For Pendant Control



Circuit Diagram No. B-107 994

Figure 5 - 2. Circuit Diagram For Circuit Board PC5

